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### In Brief

**WATER FOUND:** Instruments on NASA's 2001 Mars Odyssey spacecraft have found enough frozen subsurface water on Mars to fill Lake Michigan twice, NASA said. The spacecraft's gamma ray spectrometer indicated water ice in the top three feet of soil in a region surrounding the planet's south pole.

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## GPS signal will be effectively strengthened by 2009, program official says

Amid growing concern over the possibility of jamming, the Global Positioning System (GPS) satellite constellation should have its signal effectively boosted by 2009 under the current launch schedule, according to Col. Doug Loverro, system program director of the NAVSTAR GPS Joint Program Office.

By 2003 or 2004, the Air Force will begin launching GPS satellites that boast a signal 10 decibels higher than their current brethren in orbit (DAILY, April 18). However, since GPS users must receive signals from four spacecraft at once, the constellation will have to consist almost entirely of these new satellites before the positioning signal will truly be stronger, Loverro

told The DAILY.

"There is a slight incremental boost when you can guarantee at least one of [the stronger] satellites is among those that you can see," he said. "By the time we get about eight of them up there, that will just about guarantee that you'll have one that you can see at all times, so there's a slight incremental boost then."

"But really you don't get a major increase until you [have at] least four of them in view, which frankly takes just about an entire constellation," he said.

The president's fiscal year 2003 budget includes money to boost the GPS signal. If Congress approves the funds, the first satellite with the

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## Denmark becomes third partner in Joint Strike Fighters's SDD phase

Denmark became the third country to join the system development and demonstration phase of the Joint Strike Fighter program, U.S. and Danish officials said May 28 at a Pentagon ceremony.

"Our participation in the program will give the Danish armed forces the opportunity to contribute to the development of the aircraft itself and also to the development of the logistic aspects and concepts of the program," said Danish National Armaments Director Jorgen Hansen-Nord.

"We will also get valuable knowledge of cutting-edge technology that

will be important to us in the evaluation of future military programs," he said.

Hansen-Nord said Denmark will contribute \$125 million to the program, \$20 million of which will come from industry.

"The Danish defense industry may be small in size, we know that, but I believe that they are great in performance and great in quality," Hansen-Nord said. "They know very well that they will have to be competitive and to excel to get their share of the work and they have promised me that they are ready for that."

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Hansen-Nord said the memorandum of understanding documents committing Denmark to the program's 10-year SDD phase don't represent an agreement to buy the aircraft.

"We do not have any decision as yet concerning the number of aircraft we might procure," he said. "That's a decision that lies some 12-15 years into the future from now."

E.C. "Pete" Aldridge, the undersecretary of defense for acquisition, technology and logistics, said a Navy and Marine Corps study, which considered cutting their JSF buy, would not have an immediate impact on the program.

"We have asked in the Defense Planning Guidance for them to come back and give us an update for the POM review, because this is really an out-year issue, not a near-term issue," Aldridge said. "... We're now going through looking at the out year review because it's going to be really to the year 2012 before there's going to be any kind of a change in the numbers of aircraft."

The United Kingdom and Canada already have joined the program, and Aldridge said more decisions are expected soon.

Aldridge said the Netherlands and Italy likely will decide on joining the program around the first part of June, and negotiations are underway with Turkey and Norway, which are "in the final phases of negotiation for coming on board."

## Pakistan follows Ghauri missile test with short-range missile test

**NEW DELHI** - In the face of increasing tension between India and Pakistan, Pakistan successfully test-fired its nuclear-capable Ghauri (Hatf-5) missile on May 25, and a day later test-fired its Ghaznavi (Hatf-3) missile.

The Ghauri has a range of up to 1,500 kilometers (932 miles) and the Ghaznavi has a range of 290 kilometers (180 miles).

The May 25 Ghauri test was the third test of the missile, which Pakistan officials have said is indigenous. The first test was conducted in 1998. The second Ghauri test was held on April 14, 1999, three days after India tested its medium range Agni missile, with a range of around 2,000 kilometers (1,243 miles).

A senior Indian ministry of defense official said the Ghauri missile, with a payload of around 700 kilograms (1,543 pounds), is a North Korean missile acquired about 1994. The official said the missile belongs to the No Dong series of North Korean missiles.

A diplomat at the Pakistan embassy said the Ghauri missile has been inducted in the Pakistan defense forces and is capable of being installed on ships.

The Ghaznavi short-range missile was tested by Pakistan on May 26. Pakistan acquired the missile in response to India's indigenous short-range Prithvi missile.

The Indian ministry of defense official said the Ghaznavi missile is China's M-11 missile, a two-stage missile with a 500-kilogram (1,102 pound) payload. Pakistan acquired an unspecified number of these missiles from China between 1991 and 1995, the official said.

Pakistan's testing of nuclear-capable missiles is a warning to New Delhi that Islamabad can use the nuclear option, said Suresh Kumar, an independent defense analyst based in New Delhi.

- Bulbul Singh ([bulbul.singh@indiatimes.com](mailto:bulbul.singh@indiatimes.com))

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stronger signal will likely be launched in late 2003 or early 2004, according to Loverro.

The current 28-spacecraft constellation consists of four Block II spacecraft, 18 Block IIA's and six Block IIR's. Of the 26 additional GPS IIF and IIR satellites being built, at least 20 will have the stronger signal, according to Pentagon officials. The first Block IIF satellite is scheduled to launch in late 2005.

**Early retirement?**

Officially, the Air Force considers retiring GPS satellites only when they begin to show signs of performance degradation, although discussions are currently underway about replacing satellites early to improve performance sooner, Loverro said.

"There are certainly discussions at many levels about when and/or if we will launch to gain new capability, rather than launch to simply replace dying satellites," he said. "We call it a little bit of 'proactive launching.' I wouldn't say there are any firm decisions [yet] - it's a discussion on how we manage the constellation."

However, a flurry of closely spaced launches to enhance capability quickly could weaken the constellation down the road, as those spacecraft approach end-of-life at the same time, he said.

"So it's not just a question of, do we launch to replace capability, but do we launch to make sure that we don't weaken the constellation to such an extent that we're at risk of losing too many at once?" Loverro said.

Most of the satellites in the current constellation were launched from 1990 to 1995, with nearly 18 going up within a space of three years, according to Loverro.

Two more GPS launches, of Block IIR satellites that will not feature the stronger signal, are scheduled before the end of the year. The tentative date for the first launch is August 11, although that is contingent upon avoiding a conflict with a NASA launch from Cape Canaveral. The next launch after that is scheduled for the fall.

GPS satellites occupy medium-earth orbit (MEO), approximately 11,000 miles above the surface. When a satellite is decommissioned, its orbit is boosted higher than that of the operational constellation. New satellites can be launched with as little as 60 days notice, according to Loverro.

"The health of the system is excellent right now," he said. "We've maintained 100 percent GPS operations since we went operational, so that's a pretty good record."

The threat of jamming is real, according to Loverro, although it can be effectively addressed through a combination of techniques.

**The jamming threat**

"The GPS signal is an extremely weak signal," he said. "The normal background noise from the Earth ... is 100 times stronger than the signal itself. It's like a 50-watt light bulb at 11,000 miles away."

There are three basic methods of countering jamming, according to Loverro: boosting signal strength; carefully structuring the signal itself so it can be picked out from the jamming signal; or configuring the antennas and receivers such that jamming signals are blocked.

"We believe that it's very possible to defeat most credible jammers out there, but we have to use combinations of all three of those [techniques]," Loverro said.

Next-generation GPS III satellites, featuring 100 times more power than the current spacecraft, are scheduled to begin launching by 2010. The Air Force is expected to invite industry bids to begin developing GPS III later this year.

- Jefferson Morris ([jeff\\_morris@AviationNow.com](mailto:jeff_morris@AviationNow.com))

## Korean officials seek launch vehicle for Kompsat-2

**MOSCOW** - A delegation from the South Korean space agency, the Korean Aerospace Research Institute (KARI), is in Russia seeking a vehicle to launch the Korea Multipurpose Satellite-2 (Kompsat-2).

The delegation met over the weekend with representatives of Launch Services; Kosmotras, a Russian-Ukraine joint venture; Eurockot; and Cosmos International GmbH. Launch Services and Cosmos use the Kosmos-3M vehicle for lightweight satellite launches. Kosmotras uses converted SS-18 Satan ICBMs, designated as a Dnepr launch vehicles, and Eurockot uses converted SS-19 Stiletos, which are maintained and operated by the Khrunichev Center.

Kompsat-2 is equipped with a one-meter resolution panchromatic camera and a four-meter resolution multispectral camera, and is part of a planned six-satellite remote sensing constellation.

According to KARI, it will provide surveillance of disasters in the Korean region, acquire high-resolution images for geographic information systems and maps.

A contract between KARI and China Great Wall Industry Corp. to launch Kompsat-2 on a Long March 2C/CTS vehicle was announced in March 2001.

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However, a KARI statement said the institute is examining launch options under an international tender, slated to be finished after June 4. The actual satellite launch is planned for April 2004. The total six-satellite program cost is reportedly \$360 million.

As a Khrunichev press aide told The DAILY, KARI likely will launch the first satellite on its chosen booster and consider launch options for the remaining satellites based on the result of that launch.

Khrunichev officials took KARI officials to the Plesetsk launch center to demonstrate launch preparations for the Rockot vehicle slated to deliver two Iridium replacement satellites in July.

- Dmitry Pieson ([dpieson@mail.ru](mailto:dpieson@mail.ru))

## With new SBIRS baseline, all AF satellite programs seen achievable

**COLORADO SPRINGS, Colo.** - Lt. Gen. Brian A. Arnold, commander of Air Force Space Command's Space and Missile Systems Center, said now that a new baseline has been given to the effort to develop the Space Based Infrared System (SBIRS), every program managed by his satellite development operation at Los Angeles Air Force Base, Calif., can be executed. He also said it might not be easy.

An underestimation of software work boosted the cost and delayed the schedule of SBIRS, intended to be the next generation early warning satellite system.

Industry has been criticized, sometimes by Arnold himself, for such shortcomings. He was asked during a question-and-answer period at a May 22 symposium at Peterson Air Force Base here what industry can do to help sell the space story and get back on track.

"I think if you look at the successes here that we're providing the warfighter, that's the way you start off, and we are doing a great job," he said at the symposium, "Space Ops 2002," sponsored by the local chapter of the Air Force Association. "We have the healthiest warning constellation this country has ever had, absolutely the best we've ever had. We have the healthiest GPS constellation this country's ever had - that the world's ever had. We're able to provide discrete navigation [to] stack four aircraft, where we used to just stack one, and I could go on and on and on.

"So," he continued, "there's a lot of great things [that are done] in industry that we, the acquirers and the operators, can brag about, first of all."

Secondly, he said, "I can tell you, when I look across my entire portfolio, now that we have re-based our SBIRS program, that all our programs are exe-

cutable. Now, that's not to say that they're not going to fall off the cliff as we go through the budget year and as the POM [Program Objective Memorandum process] moves forward," because a number of "great ideas" are competing for funds at the Pentagon.

Back to basics

"We've got a lot of content if we get sufficient funds to do that - at the same time modernize and the same time sustain," he said. "So there's going to be some cut-and-paste in there. When you do that, some things get broken, or they get moved to the right, and they increase in cost. As long as they increase in cost as a function of a budget cut or something that Congress does or takes [away], then I can't do anything about it."

But, he said, "if we can focus on the systems engineering" and "doing it right, that's where we can really win, whether you're in industry or you're working at" his organization or in some other part of the Air Force.

"And that goes back to the basics," Arnold said. "As long as it's a right-sized SPO [Systems Program Office], not ... a lean SPO" and not an "acquisition experiment," the promise of success is increased. "No longer will we do TSPR [Total System Performance Responsibility] for a very complex, highly demanding software development program," he said, apparently referring to SBIRS. "We might do it for a sustainment program."

In addition, he said, the aim is to "try to get away from fixed-price contracts early on in a very complex program." These "are just some of the basics we've got to go back to."

But, he said, "we ought not to throw our hands up and run around with our hair on fire and say everything is broken because, in fact, it's not."

In prepared remarks, he cited the "unprecedented" achievement of launching three high-value National Reconnaissance Office satellites within 33 days of getting the order to do so on Sept. 13, two days after the Sept. 11 terrorist attacks.

"We got three critical launches off and all [were] successful," he said. "By the way," he added, "we've got 21 back-to-back successful launches" and "I think we've got the recipe down."

As the era of the Evolved Expendable Launch Vehicle (EELV) approaches, Arnold said, "we need to continue to use that same recipe. We ought not to lose the way we're going through our flight readiness reviews. All those kinds of things are extremely important. This is very important, and that is just a good contribution to the warfighter, putting up very high [value] NRO assets to help ... others fight this war."

- Rich Tuttle ([richtut@aol.com](mailto:richtut@aol.com))

## DARPA, Army select first round of UCAR contractors

The Defense Advanced Research Projects Agency (DARPA) and the U.S. Army have selected the four contractor teams that will compete in Phase 1 of the Unmanned Combat Armed Rotorcraft (UCAR) program, DARPA announced May 28.

Each team will receive approximately \$3 million for a 12-month concept development and system trades phase. The teams are:

- Lockheed Martin Systems Integration of Owego, N.Y., and Bell Helicopter Textron Inc. of Fort Worth, Texas.
- McDonnell Douglas Corp., a wholly owned subsidiary of the Boeing Co. of St Louis, Mo.
- Northrop Grumman Systems Corp. of San Diego, Calif.
- Sikorsky Aircraft Corp. of Stratford, Conn., and Raytheon Co. of El Segundo, Calif.

UCAR will be an all-weather, highly autonomous unmanned rotorcraft designed for low-altitude armed reconnaissance and attack missions by day or night. The system will be capable of collaborating with other UCARs and also with other manned and unmanned systems within ranges of a few hundred feet, according to DARPA Program Manager Don Woodbury (DAILY, May 22).

Unlike other unmanned aerial vehicles, such as the Air Force's Unmanned Combat Air Vehicle (UCAV) and Global Hawk, the UCAR will not have a dedicated ground station. Instead, the system will integrate into existing command and control platforms such as the Comanche helicopter, the Army Airborne Command and Control System, or ground-based command and control systems.

Capable of autonomous mission planning while in flight, the UCAR will request guidance from a human operator only for tasking and final weapons authorization. After getting target cues from other surveillance systems, the UCAR will be able to identify the target at ranges two to three times greater than current systems, according to DARPA.

One third of Comanche's cost

The acquisition goal for the program is for each UCAR to cost one third as much as the Comanche, and incur one fourth of its operation and maintenance costs.

In Phase 1, each team will conduct mission effectiveness and affordability trade studies, after which two contractors will be selected to proceed with a nine-month second phase in which they will complete the

preliminary design of a demonstration system.

In Phase 3, scheduled for fiscal year 2004 through 2006, DARPA plans to build two different UCAR demonstrators. If the demonstrations are successful, DARPA is scheduled to hand the UCAR to the Army in fiscal year 2009.

## Czech defense minister rejects Belgian F-16 offer

**PRAGUE** - Czech defense minister Jaroslav Tvrdik on May 24 angrily dismissed Friday a Belgian offer to sell the Czech Republic 24 used Lockheed Martin F-16 fighters.

Tvrdik told journalists in Prague that the offer, made by the Belgian ministry of defense at the beginning of May, amounted to "interference" in Czech internal politics, because the country's senate is about to debate the purchase of 24 Gripen fighters from the BAE Systems/Saab consortium.

According to Tvrdik, the Belgian ministry made a similar offer in 1997, which was rejected by the head of the Czech chiefs of staff at the beginning of 2001.

Eighteen of the offered planes were mothballed about eight years ago, while the rest were reaching the end of their operational lifespan. He said those six had already flown between 2,400 and 3,200 hours.

"The offer concerns the oldest version of the F-16, comparable with the SU-22, whose operations were yesterday terminated in the army of the Czech Republic," he said.

Tvrdik also said that the planes did not fulfill the requirements of interoperability within the alliance "by a long way". They were not equipped for mid-air refueling for example, and were incapable of using modern missile systems, including laser-guided munitions.

Describing the offer as having "zero value," Tvrdik said he would demand an explanation from his Belgian counterpart Andre Flahaut. The Czech government, he added, would not discuss it.

The Czech defense minister, who said there was no price tag attached to the offer, also questioned the timing of the new offer.

"The question remains - who does this repeated offer serve when it comes just a few days before voting in the senate on the purchase of the modern Gripen aircraft?"

Petr Necas, chairman of the Defense and Security Committee in the parliament's lower house, said he had been sent a copy of the offer.

"My opinion is the same," he told the DAILY. "I am against the purchase of any supersonic aircraft whether it is a Gripen or F-16. Either way it is a bad purchase for us."

- Magnus Bennett (mbennett@pna.cz)

## U.K. stops defense exports to India, Pakistan

The United Kingdom put defense exports to India and Pakistan on hold May 24 in response to increasing tensions on the Indian-Pakistan border, the government there announced last week.

Trade and industry secretary Patricia Hewitt signed the order May 24, placing a temporary hold on all defense exports to the region.

Following nuclear tests conducted by India and Pakistan in 1998, the U.K. placed broad sanctions on the export of defense articles to India and Pakistan. Many of those sanctions were lifted earlier this year.

The United States also lifted sanctions against India and Pakistan last year. The U.S. has not placed any new sanctions on India or Pakistan, although a senior U.S. official told *The DAILY* that due to new tensions along the India-Pakistan border, no new defense exports are being processed for the time being (*DAILY*, May 24).

Since the U.S. lifted sanctions against India and Pakistan last year, U.S. companies have begun to renew ties with the two countries. A Lockheed Martin spokesperson told *The DAILY* that the company has submitted license requests to supply Pakistan with spare parts for the country's C-130s and F-16s.

General Electric already has a license that allows the company to provide India with technical support for GE F404 engines used in India's Light Combat Aircraft program, a company spokesperson confirmed.

GE sold the engines to India before the 1998 sanctions, and was able to resume cooperation with India after the sanctions were lifted. Work on the program has not been suspended, a company spokesperson said.

## No change seen in Boeing outlook, despite fewer wide-body deliveries

Aerospace and defense analysts with Deutsche Bank have not changed their short-term outlook for the Boeing Co., despite the company's recent announcement that it will deliver fewer aircraft than expected in 2003.

Boeing Commercial Airplanes President and CEO Allan Mulally said during the company's recent investors conference that Boeing will remove eight wide-body aircraft from its production schedule due to sluggish growth in long-haul traffic. The expected delivery of 275-300 aircraft for 2003 remains unchanged.

"We see upward pressure now, and also in 2003, on the single-aisle airplanes, mainly driven by the low-cost operations and the point-to-point operations" like Lion Air and Southwest, he said.

"We're also still seeing ... downward pressure on the twin-aisle airplanes mainly because of the traffic on the long haul - the North Atlantic and Pacific - is recovering with the economy," Mulally said.

Senior aerospace and defense analyst Christopher Mecray of Deutsche Banc Alex. Brown, said in a May 23 report that "we have no immediate changes to our outlook or estimates."

Mulally said one potential growth area for the Commercial Airplanes division is services operations.

"Of course, the big piece in that is all of the spares, and we're really working the efficiency angle of the spares and logistical support," he said.

To provide the necessary logistical support to the airlines, Boeing is establishing regional operations centers, Mulally said. Boeing also will ask more of its suppliers to help provide operational support to the airlines, he said.

"At the end of the day, a lot of our partner suppliers go directly to the airlines. And the airlines always want an airplane solution to include more of our partners and suppliers in our operational support," Mulally said.

Re-engineering and modification also are pieces of the logistical support strategy, he added. Nearly 80 percent of all commercial airplanes flying today are Boeing aircraft, according to Mulally. "When you buy an airplane, the safety part and the efficiency part [imply] a long-term relationship," Mulally said.

Although Boeing doesn't plan to do the actual "wrench turning," it does plan to provide "intellectual capital" for projects involving cabin and in-flight entertainment system upgrades and new cockpit installations, he said.

"We're getting more and more requests because of our systems integration capability to [provide] the intellectual knowledge. I think that's going to be a tremendous growth business for us," he said. "It also helps us stay closer to the older airplanes."

Mecray says in the May 23 report that while plans to expand the services operations sound reasonable given the number of Boeing aircraft flying, they "could be difficult to execute given the fragmentation of the services and support sector." Plans to grow the engineering support services in the past have been only moderately successful, the report says.

"We remain somewhat cautious on the prospects here, and note a relative failure to follow through with promises of significant growth in this area over the last 10 years through numerous initiatives," Mecray says.

Most of the growth in engineering support services has come through mergers and acquisitions with companies such as Jeppesen Sanderson Inc., the report says.

- Nick Jonson ([nick\\_jonson@AviationNow.com](mailto:nick_jonson@AviationNow.com))

## Teets optimistic on defense space acquisition plan

**COLORADO SPRINGS, Colo.** - Air Force Undersecretary Peter B. Teets said he is optimistic about a new acquisition plan for military space systems, and said as the Defense Department's executive agent for space, "I'm confident we can make some real headway" in putting the system in place.

"We are very much in the process right now of establishing what I would hope to be a faster, more agile, responsive acquisition system for the nation's national security space programs," Teets said May 22 at a symposium at Peterson Air Force Base here.

The model for the new system "is what's been referred to as NRO [National Reconnaissance Office] Directive Seven," Teets said in response to a question following formal remarks.

He said the directive was "a disciplined way of proceeding down the path of an acquisition process with all due review and attention paid to appropriate details in the process, but one which will allow independent review teams to collaboratively engage problems in the acquisition process and make decisions in a more timely way."

The goal, he said, is "to reduce the cycle time in Defense Space Acquisition Board cycles by about a factor of two, and we think we can do so."

Maj. Gen. Robert S. Dickman (U.S. Air Force-ret.), deputy for military space in Teets' office, and Dennis Fitzgerald, deputy director of the NRO, are among those participating in the effort. "I think we'll have more efficient, more effective acquisition going forward in future space systems," Teets said.

Asked about the outlook for military space programs on Capitol Hill at the day-long "Space Ops 2002" symposium, sponsored by the local chapter of the Air Force Association, Teets said "there's an attitude [there] of support and help" but "it'll be up to us to be smart enough to figure out precisely how to defend the budget and proceed with the systems [we need]."

Teets said, "I would be less than candid if I said I thought we could proceed on the same schedule that I was hoping we could do in the December-January time frame. Resources to continue our legacy programs [and] the large resources, very frankly, required to fix some of our large acquisition programs, probably won't allow us to bring ... new systems on line as fast as we hoped."

Teets predicted an "interesting several months ahead." The president's fiscal year 2003 budget, he said, "is an outstanding start," providing "funds that will enable us to bring on line" several transformational systems. "It will allow us to start a program involv-

ing space-based radar, once we define it. It will also enable us to do the right things to make our GPS system more jam resistant. So there's an aggressive start."

He said, "right now we're spending '02 dollars. All of us [in Air Force management] are over on the Hill testifying before Congress and defending the president's '03 budget and trying to gather support. And all at once, the '04 POM [Program Objective Memorandum] is upon us."

"And this is going to challenge us all because, very frankly, there aren't enough resources, I don't think, to proceed as aggressively as many of us would like. So we're going to have to make some hard choices, and that debate will take place over the course of" coming months.

Asked how he thought the NRO would fare, Teets said he doesn't address "programmatics associated with NRO in public forums." But, he said, "just in a very generalized sense, I think the prospects for the NRO are similar to the prospects for the Air Force and DOD military space programs - namely, there's more receptivity in Congress, budgets are on the increase rather than the decrease. But that's about as specific as I would like to get."

- Rich Tuttle ([richtut@aol.com](mailto:richtut@aol.com))

## Third 'space tourist' flight this fall doubtful, Rosaviakosmos says

**MOSCOW** - Rosaviakosmos representatives 'strongly doubt' that a third space tourist will be able to ride on the Soyuz TMA-1 taxi mission this fall with Sergey Zalyotin and Belgian Frank de Winne.

According to the Russian space agency, none of the five candidates has signed a flight contract so far. The four known candidates are former NASA associate administrator Lori Garver, pop star Lance Bass of \*NSYNC, Australian Lilly Craig and a member of the Russian pop group Na-Na. The fifth candidate is reportedly Polish banking magnate Leszek Czarnecki, who has not confirmed his plans.

According to Russian media sources, the reasons for the Rosaviakosmos statements could be financial. Previous 'space tourists' Dennis Tito and Mark Shuttleworth paid less than the reported \$20 million - \$12 million for Tito, \$14.5 million for Shuttleworth - but this time the Russian government is insisting on the full \$20 million.

Garver and Bass were expected to pass their medical examinations at Moscow's Institute for Medical and Biology Problems, the country's leading space medicine institution, although Bass' examination was delayed due to a cold. Craig, just announced as a possible tourist, is beginning her medical examination.

- Dmitry Pieson ([dpieson@mail.ru](mailto:dpieson@mail.ru))

## Contracts

May 20, 2002

### NAVY

**The Bell-Boeing Joint Program Office**, Patuxent River, Md., is being awarded a \$13,900,000 not-to-exceed modification to a previously awarded cost-plus-award-fee contract (N00019-93-C-0006) for non-recurring efforts in support of the CV-22 Block Upgrade/Restructure Program. This will include flight operations, improve the effectiveness and suitability of the aircraft, and incorporate mission enhancements. Work will be performed in Fort Worth, Texas (50 percent), and Ridley Park, Pa. (50 percent); and is to be completed in March 2003. Contract funds will not expire at the end of the current fiscal year. The Naval Air Systems Command, Patuxent River is the contracting activity.

**Raytheon Co.**, Fort Wayne, Ind., is being awarded a \$6,600,010 firm-fixed-price contract for the procurement of AN and ARC-187 radio components for the P-3C and S-3B aircraft. The components include 78 RT-1571A receiver and transmitters; 78 AM-7373 amplifiers; 78 HD-1166 coolers and 83 C-12435 controls. Work will be performed in Largo, Fla. (75 percent) and Fort Wayne, Ind. (25 percent) and is to be completed by October 2004. Contract funds in the amount of \$90,840 will expire at the end of the current fiscal year. This contract was not competitively procured. The Naval Air Systems Command, Patuxent River, Md., is the contracting activity (N00019-02-C-3183).

**Smiths Aerospace**, Clearwater, Fla., is being awarded a \$6,093,671 ceiling-priced-order contract for 12 Stores Management System ship sets for the F/A-18A and U.S. Marine Corps avionics upgrade. Work will be performed in Clearwater and is to be completed by May 2003. Navy Working Capital Funds will be utilized and the funds will not expire before the end of the current fiscal year. This order was not competitively procured. The Naval Inventory Control Point, Philadelphia is the contracting activity (N00383-00-G-002D-0029).

May 21, 2002

### NAVY

**Vought Aircraft Industries, Inc.**, Dallas is being awarded a \$6,603,774 modification to previously awarded cost reimbursement, no-fee facilities capital maintenance contract (N00019-00-E-0497) to exercise an option for materials and services in support of the capital type rehabilitation and maintenance of the Naval Weapons Industrial Reserve Plant (NWIRP), Dallas. Work will be performed in Dallas and is to be completed by May 2005. Contract funds will not expire at the end of the current fiscal year. The Naval Air Systems Command, Patuxent River, Md., is the contracting activity.

**Lockheed Martin Aeronautics Co.**, Marietta, Ga., is being awarded a \$5,820,613 modification to a previously awarded cost-plus-fixed-fee contract (N00019-01-C-0172) to provide additional funding for the repair of the EP-3 aircraft that was stranded on Hainan Island, People's Republic of China. Work will be performed in Marietta, Ga., and is to be completed in January 2003. Contract funds in the amount of \$3,950,608 will expire at the end of the current fiscal year. The Naval Air Systems Command, Patuxent River, Md., is the contracting activity.

## Selected aerospace and defense contracts for the week of May 20 - 24

May 22, 2002

### AIR FORCE

**Lockheed Martin Corp.**, Sunnyvale, Calif., is being awarded a \$498,000,000 firm-fixed-price contract modification. This is an amendment to the existing letter contract that was issued November 16, 2001. The letter contract is for the Advanced Extremely High Frequency (AEHF) System Development and Demonstration (SD&D) phase. The purpose of this amendment is to increase the not-to-exceed from \$2.698 billion to \$3.196 billion. This increase is a result of the fiscal year 2002 appropriation act decrease of \$70 million and the loss of \$30 million in international partner funding. Also, the not-to-exceed increase includes effort necessitated by the recent revision of the National Security Agency's KI-54 Interface control document, revision D in the amount of \$46 million. This action provides for satellites replacement and upgrade of the associated ground command and control segment, and the necessary sustainment. At this time, no funds have been obligated. The period of performance for this effort will span approximately 10 years. Lockheed Martin Corp. will perform this effort at TRW Inc. Space and Electronics Group, Redondo Beach, Los Angeles (46 percent), and Lockheed Martin Corp., Lockheed Martin Missiles and Space, Sunnyvale, Calif. (28 percent) and other locations. The Space and Missile Systems Center, Los Angeles Air Force Base is the contracting activity (F04701-02-C-0002, P00007).

May 24, 2002

### AIR FORCE

**United Technologies Corp.**, East Hartford, Conn., is being awarded an \$8,514,951 undefinitized-contract to provide for Diffuser Cases, 87 each, for the F-100PW 100, 200, and 220E engine which power the F-15 and F-16 type aircraft. The location of performance is Pratt and Whitney, East Hartford. At this time, \$4,257,475.50 of the funds has been obligated. This work will be completed by February 2004. Solicitation began in May 2002 and negotiations are now completed. The Oklahoma City Air Logistics Center, Tinker Air Force Base is the contracting activity (F34601-01-G-0006-0404).

**Northrop Grumman Corp.**, Melbourne, Fla., is being awarded a \$7,938,000 undefinitized-contract modification for one Joint Surveillance Target Attack Radar System Lot XI aircraft (P17) advance procurement effort. At this time, \$7,938,000 of the funds has been obligated. The Electronic Systems Center, Hanscom Air Force Base, Mass., is the contract activity (F19628-02-C-0022 P00002).

**Lockheed Martin Aeronautics Co.**, Ft. Worth, Texas, is being awarded a \$6,404,844 contract modification to provide for Wing Weapon Pylon I for Belgium, Denmark, Norway, The Netherlands, and U.S. Air Force Air National Guard. This effort supports foreign military sales to Belgium, Denmark, the Netherlands, and Norway. At this time, \$6,404,844 of the funds has been obligated. This work will be completed in October 2003. The Aeronautical Systems Center, Wright-Patterson Air Force Base, Ohio, is the contract activity (F33657-00-C-0060, PZ0006).

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